



999 WEST VALLEY ROAD  
WAYNE, PENNSYLVANIA 19087  
215-687-9510

8910-16-36

ORIGINAL

April 6, 1990  
T-585-4-0-38  
68-01-7346

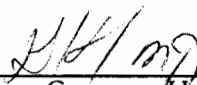
Mr. Gregory Ham  
United States Environmental Protection Agency  
841 Chestnut Building  
Ninth and Chestnut Streets  
Philadelphia, Pennsylvania 19107

Dear Mr. Ham:

Attached please find three uncontrolled final copies of the site inspection (using available information) of Rockwood Compressor Station, prepared under TDD No. F3-8910-16.

Please endorse below confirming that you have received the attached subject data and return the form to the above address.

Attachments

Signature:   
Gregory Ham

Date: 4/11/90



999 WEST VALLEY ROAD  
WAYNE, PENNSYLVANIA 19087  
215-687-9510

February 15, 1990  
T-585-2-0-66  
68-01-7346

Mr. Anthony Dappolone  
U.S. Environmental Protection Agency  
841 Chestnut Building  
Ninth and Chestnut Streets  
Philadelphia, PA 19107

Dear Mr. Dappolone:

Attached please find three uncontrolled draft copies of the site inspection (using available information) of Rockwood Compressor Station, prepared under TDD No. F3-8910-16.

Please endorse below confirming that you have received the attached subject data and return the form to the above address.

Sincerely,

A

Anthony Dappolone

Date: \_\_\_\_\_

NUS Corp.

89/12/27

ORIGINAL  
(Red)

## Pennsylvania Natural Diversity Inventory

SITE: Rockwood Compressor Station  
Murdock quadrangle., Somerset Co.

EO Type <sup>(1)</sup> / Number	Element Name	Precision	Last Observed	Federal Status	PA Status	Global Rank	State Rank
* <u>1 - 2 miles from site.</u>							
R 014	Eumeces anthracinus	M	1987	N	N	G5	S2S3
* <u>3 - 4 miles from site.</u>							
M 044	Neotoma floridana magister	S	1983	C2	PT	G5QT4	S3
P 021	Platanthera peramoena	M	1970	3C	TU	G4	S3
I 006	Calopteryx angustipennis	M	1900	N	N	G4	SU
P 004	Melica nitens	M	1899	N	TU	G5	S2
* <u>Approximately 15 miles downstream from site.</u>							
P 009	Orontium aquaticum	M	1898	N	N	G5	S2S3

NOTE: (1) EO Type: A = amphibian  
B = bird  
C = natural community  
I = invertebrate  
M = mammal  
P = plant  
R = reptile

# PENNSYLVANIA NATURAL DIVERSITY INVENTORY

ORIGINAL  
(Red)

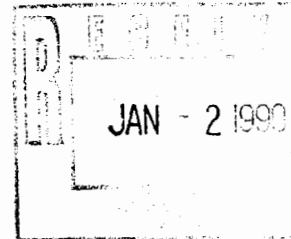
Bureau of Forestry - Forest Advisory Services  
PNDI Coordinator  
P.O. Box 1467, Harrisburg, PA 17120  
717-787-3444

WESTERN PA CONSERVANCY  
PNDI - Western Office  
316 Fourth Avenue  
Pittsburgh, PA 15222  
412-288-2777

THE NATURE CONSERVANCY  
PNDI - Eastern Office  
34 Airport Drive  
Middletown, PA 17057  
717-783-1712

1989 December 27

[REDACTED]  
Regional Operations Manager, FIT 3  
NUS Corporation  
999 West Valley Road  
Wayne, PA 19087



**RE: Five Uncontrolled Hazardous Substance Disposal Sites in  
Blair, Cambria, Fayette, Greene and Somerset Counties, PA.**

Dear Mr. Glenn:

In reference to your letter of November 15, 1989 to [REDACTED] of the Bureau of Forestry, I am responding for [REDACTED] regarding your request for review of five uncontrolled hazardous substance disposal sites in five western Pennsylvania counties.

As you requested, each site was reviewed for occurrences of special concern species and significant natural communities, within radii of 0 to 1/4 mile, 1/4 to 1/2 mile, 1/2 to 1 mile, one to two miles, two to three miles, three to four miles, and up to fifteen miles downstream from the sites identified on the maps provided with your request. As in the past, please note that all special concern resources tracked by the Pennsylvania Natural Diversity Inventory (PNDI) project were included in the review. A number of these resources are species with no official state status, although PNDI is monitoring their statuses and trends.

Enclosed please find the results of our evaluation of these sites. Printouts are provided for search radii where data points were encountered. No data points were intersected within one mile of any of the sites, although historic and extant occurrences of special concern species were determined for all sites at farther distances.

Please be advised that statutory authority for Pennsylvania's animals and plants resides with three administrative agencies. The Pennsylvania Game Commission and the Pennsylvania Fish Commission may have information pertinent to the review of this project and should be consulted for their comment.

Your request has been processed utilizing the Pennsylvania Natural Diversity Inventory (PNDI), a multiple index data system which contains locational and ecological information detailing occurrences of rare and endangered species, significant biological communities, and geologic features within the state of Pennsylvania. The Western Pennsylvania Conservancy and The Nature Conservancy are currently under contract to the Pennsylvania Department of Environmental Resources to develop and maintain the PNDI system.

89/12/27

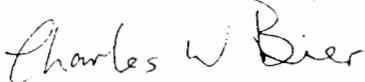
ORIGINAL  
(B-1)

assess the natural resources of the project areas.

The PNDI project is funded largely through contributions to the Wild Resource Conservation Fund. This fund was established in 1982 by the Pennsylvania Legislature to provide support for the research and conservation of significant natural resources within the Commonwealth. I trust that you will find our response to your request for site specific information to be of value to your business. Therefore, please consider making a contribution to the Fund.

If you have any questions regarding the enclosed data response, or if you feel the Bureau of Forestry or the Western Pennsylvania Conservancy can be of any further assistance, please feel free to contact either of our offices.

Sincerely,



Charles W. Bier  
Plant/Animal Ecologist  
PNDI - Western Office

Enclosures

cc: J. Arway, PA Fish Commission  
R. Fickes, PA DER, Div. of Rivers and Wetlands Conservation  
C. Kulp, U.S. Fish and Wildlife Service  
K. McKenna, PA DER, Bureau of Forestry  
J. Sitlinger, PA Game Commission

8910.16.16

## NUS CORPORATION AND SUBSIDIARIES

TELECON NOTE

CONTROL NO.:

DATE:

12/22/89

TIME:

11:05

ORIGINAL  
(Red)

DISTRIBUTION:

Rockwood Compressor Station

BETWEEN:

OF:

Rockwood Post Office

PHONE:

(814) 926-2553

AND:

(NUS)

DISCUSSION:

[REDACTED] told me he is 54 years old, born in 1935 & has always lived in the area. He currently lives a "stones throw" from the compressor station. He said the <sup>pipe</sup> ~~water~~ was built in 1942 & 43 by the U.S. Government & that Texas Eastern bought it in 1948. He said trucks used to come at night & dump liquids. He also said he used to fish in the unlined tributary to Wilson Creek but it has been polluted with some kind of oily substance. He said the people from Texas Eastern have been very "rude" to him & other locals. He said the pipeline runs through his property & is above ground in some places. He does not like Texas Eastern. He can be called upon in the future.

[REDACTED]

ACTION ITEMS:

8910-16-03

## Geo/Hydro - Water Supply Request/Tracking Form

Project Name: ROCKWOOD COMPRESSOR STA Project Leader: JEFF MILLER  
 TDD No.: F-3-8910-16 State/County: P.A. SOMERSET CO.  
 Charge No.: APCB I&R U.S.G.S. Quadrangle: MURDOCK + ROCKWOOD

- ☐ Preliminary review (attach background information and three-mile map)  
 [To be used for sampling plan, recon report, and field study]

DATE LEAVING FOR FIELD: \_\_\_\_\_

Geo/Hydro Assignment (Initial and Date)	Pre-Review Completed (Date)	Geo/Hydro Approval (Initial and Date)	Project Leader Receipt (Initial and Date)
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- ☐ Preparation of preliminary assessment report  
☒ Preparation of site inspection report  
 (attach pre-review, background information, three-mile map, field information, and well surveys)

REPORT DUE DATE TO WORD PROCESSING: \_\_\_\_\_

Geo/Hydro Assignment (Initial and Date)	Geo/Hydro and [PA/SI Form] Completed (Initial and Date) <u>R.W.G.</u> <u>12/15/89</u>	Geo/Hydro Review (Initial and Date)  <input type="checkbox"/> Comments in Text	Geo/Hydro Approval (Initial and Date) <u>WMF</u>	Project Leader Receipt (Initial and Date)
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- ☐ Peer Review (attach copy of comments and report)

REPORT DUE DATE TO WORD PROCESSING: \_\_\_\_\_

Geo/Hydro Assignment (Initial and Date)	Geo/Hydro Completed (Initial and Date)	Geo/Hydro Review (Initial and Date)  <input type="checkbox"/> Comments in Text	Geo/Hydro Approval (Initial and Date)	Project Leader Receipt (Initial and Date)
---	--	---	---	---

- ☐ Other - (explain task below and attach necessary background information and maps)  
 DUE DATE (TO PROJECT LEADER): \_\_\_\_\_

Task: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Geo/Hydro Assignment (Initial and Date)	Geo/Hydro Completed (Initial and Date)	Geo/Hydro Review (Initial and Date)  <input type="checkbox"/> Comments	Geo/Hydro Approval (Initial and Date)	Project Leader Receipt (Initial and Date)
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8910-16-15

## NUS CORPORATION AND SUBSIDIARIES

TELECON NOTE

CONTROL NO:

8910-16

DATE:

DEC 7, 1989

TIME:

2:30

ORIGINAL  
(Red)

## DISTRIBUTION:

WATER SUPPLY - ROCKWOOD COMPRESSOR  
SOMERSET CO., PA.

BETWEEN:

[REDACTED]

OF: SOMERSET  
TOWNSHIP

PHONE:

[REDACTED]

AND:

[REDACTED], NUS FIT 3

## DISCUSSION:

SOMERSET TWP. MAINTAINS TWO SEPARATE SYSTEMS

— LISTE SYSTEM SERVES COMMUNITY OF LISTE. SOURCE IS ONE WELL (APPX 48 FT DEEP, YIELD 60 GPM) AND SPRINGS NEAR SMALL POND JUST NORTH OF ST MICHAELS CHURCH. NO INTERCONNECTIONS WITH OTHER SYSTEMS. 63 CUSTOMERS.

— THE OTHER SYSTEM IS FULLY INTERCONNECTED WITH BOROUGH OF SOMERSET MUN. AUTH. & PURCHASES ALL WATER FROM THEM. THIS SYSTEM SERVES THE MORE POPULATED AREAS IMMEDIATELY SURROUNDING THE BOROUGH AND IS EXPANDING RAPIDLY. GROWTH ALONG HWY ~~601~~ 601, 281 & 31 ESPECIALLY. MAPS OR DIAGRAMS CAN BE OBTAINED THROUGH NEILAND ENGINEERING, P.O. BOX 837, SOMERSET PA., 15501 (445-6551) GTT

[REDACTED]

## ACTION ITEMS:

[REDACTED]

12/7/89

8910 16 14

## NUS CORPORATION AND SUBSIDIARIES

TELECON NOTE

CONTROL NO:

8910-16

DATE:

DEC 7, 1989

TIME:

2:15 pm

DISTRIBUTION:

WATER SUPPLY - ROCKWOOD COMPRESSOR SITE  
SOMERSET CO., PA

BETWEEN:

[REDACTED]

OF: SOMERSET BOROUGH  
MUNICIPAL AUTHORITY

PHONE:

[REDACTED]

AND:

[REDACTED]

NUS FIT 3

DISCUSSION:

SOLE SOURCE OF SUPPLY IS SURFACE INTAKE ON LAUREL HILL  
CREEK SEVERAL MILES NW OF BORO AND JUST EAST OF  
BAKERSVILLE. THREE WELLS IN POOR CONDITION CAN BE USED  
FOR EMERGENCY SUPPLY. THEY ARE LOCATED ALONG THE  
WEST BRANCH OF COXES CREEK N. OF HWY 31 AND S. OF  
TROLLS LAKE AT FILTRATION PLANT ON USGS TOPO MAP.  
DISTRIBUTION AREA IS MAINLY THE BOROUGH AND IT'S  
IMMEDIATE SURROUNDINGS, ~~W~~ EAST TO STATE HOSPITAL  
RESERVOIRS. EST POPULATION SERVED AT 8000 OR MORE.  
(SOUTH TO FORK IN ROCKWOOD RD.) [REDACTED]

12/7/89

ACTION ITEMS:

## NUS CORPORATION AND SUBSIDIARIES

TELECON NOTE

CONTROL NO:

8910-16

DATE:

DEC. 7, 1989

TIME:

12:15 pm.

DISTRIBUTION:

WATER SUPPLY - ROCKWOOD COMPRESSOR SITE, SOMERSET  
 CO. COUNTY, PA.

BETWEEN:

[REDACTED]

OF: ROCKWOOD

WATER COMPANY

PHONE:

(814) 445-4476

AND:

[REDACTED]

NUS FIT 3

DISCUSSION:

[REDACTED] CONFIRMED THAT WATER SOURCES ARE AS DESCRIBED IN  
 GEOLOGY AND MINERAL RESOURCES OF SOUTHERN SOMERSET COUNTY,  
 PENNSYLVANIA (FLINT, NORMAN K., PADER, BUREAU OF TOPO. AND GEOL.  
 SURVEY, COUNTY REPORT 56 A, 1965). ROCKWOOD RESERVOIR AND  
 UPSTREAM IMPOUNDMENT, SPRING-FED, ON UNNAMED TRIBUTARY OF  
 ISERS RUN, AND TWO WELLS APPX 125 FT DEEP WITH APPX  
 YIELDS OF 300 GPM EACH. THE WELLS ARE WITHIN 40 FEET  
 OF THE RESERVOIR WHICH IS APPX 3 MILES SOUTH OF ROCKWOOD.

[REDACTED]  
 [REDACTED] DISTRIBUTION AREA INCLUDES ALL OF ROCKWOOD,  
 SCHOOL & AREA NORTH OF TOWN, AND ROCKWOOD STATION  
 AND AREA SOUTH OF TOWN. THERE ARE NO INTERCONNECTIONS  
 WITH OTHER WATER SUPPLIERS. NO PUBLIC WATER SUPPLY IN  
 NEW CENTERVILLE NOW, BUT ROCKWOOD WATER CO. MAY EXTEND

ACTION ITEMS:

SERVICE THERE ALONG RT. 653 IN THE FUTURE. NEXT PUBLIC  
 WATER SUPPLY IN THE AREA IS SOMERSET TO THE NORTHEAST

[REDACTED]

12/7/89



8910-16-17

# United States Department of the Interior

FISH AND WILDLIFE SERVICE  
Suite 322  
315 South Allen Street  
State College, Pennsylvania 16801

NOV 15 1989

November 13, 1989

[REDACTED]  
NUS Corporation  
999 West Valley Road  
Wayne, PA 19087

Dear [REDACTED]

This responds to your letter of November 2, 1989 requesting information on endangered or threatened species within the area affected by the following uncontrolled hazardous substance sites:

<u>Site</u>	<u>County</u>
Alcoa Parnassus	Westmoreland
Allion Chemical Co., Inc.	Delaware
Holbrook Compressor Station	Greene
Hopewell Township Dump	Beaver
Leech Tool and Die	Crawford
Paragon Plastics	Westmoreland
Rockwood Compressor Station	Somerset
Spithaler School Road	Butler

Two federally listed endangered birds are expected to be found as transient species in the project area. They are the bald eagle (*Haliaeetus leucocephalus*) and peregrine falcon (*Falco peregrinus*). There is no listed critical habitat for these species in the project area.

We have no information to indicate that any endangered species under our jurisdiction reside within a radius of three miles of the project site. Therefore, no Biological Assessment or further Section 7 consultation under the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) is required with the Fish and Wildlife Service. Should project plans change, or if additional information on listed or proposed species becomes available, this determination may be reconsidered. A compilation of federally listed endangered and threatened species in Pennsylvania is enclosed for your information.

The State of Pennsylvania has classified certain species as threatened or endangered. We suggest that you contact the Pennsylvania Fish Commission (fish, reptiles and amphibians), the Pennsylvania Game Commission (wildlife) and the Pennsylvania Department of Environmental Resources (plants) for further information on these species.

(Red)

Your letter does not contain enough information for us to determine if other resources of concern to the Service are being affected by the sites or proposed actions at the site. Specifically, we are concerned that chemical contaminants on or migrating from uncontrolled hazardous substance disposal sites may have acute or chronic toxicity effects on terrestrial and aquatic life. For example, open waste ponds, leachate seeps, and off-site contamination of streams or other surface waters can represent significant hazards to fish and wildlife resources. Food chain effects of substances that bioaccumulate or biomagnify increase these hazards.

On sites where chemical contaminants are or could be released to significant terrestrial wildlife habitat, wetlands, or surface waters, we recommend that biological studies be incorporated into your evaluation of the sites. For example, an indication of the bioavailability of contaminants released into surface waters can be obtained relatively easily by collecting two composite fish samples. We would be happy to review and comment on plans for proposed fish and wildlife studies.

Please contact us if we can be of further assistance.

Sincerely,

A large, solid black rectangular redaction box covering the signature of the Acting Supervisor.

Acting Supervisor

Enclosure

FEDERALLY LISTED ENDANGERED AND THREATENED SPECIES  
IN PENNSYLVANIA

COMMON NAME	SCIENTIFIC NAME	STATUS	DISTRIBUTION
<u>FISHES:</u>			
Sturgeon, shortnose*	<u>Acipenser brevirostrum</u>	E	Delaware River and Other Atlantic Coastal waters
<u>REPTILES:</u>			
NONE			
<u>BIRDS:</u>			
Eagle, bald	<u>Haliaeetus leucocephalus</u>	E	Entire State
Falcon, American peregrine	<u>Falco peregrinus anatum</u>	E	Entire State - re-establishment to former breeding range in progress
Falcon, Arctic	<u>Falco peregrinus tundrius</u>	E	Entire State migratory - no nesting
<u>MAMMALS:</u>			
Bat, Indiana	<u>Myotis sodalis</u>	E	Entire State
Cougar, Eastern	<u>Felis concolor cougar</u>	E	Entire State - probably extinct
<u>MOLLUSCS:</u>			
NONE			
<u>PLANTS:</u>			
Regonia, small whorled	<u>Isotria medeoloides</u>	E	Berks, Centre, Chester, Greene, Monroe, Montgomery, Philadelphia & Venango Counties

\* Principal responsibility for this species is vested with the National M. Fisheries Service.

ORIGINAL  
(Red)

FIT REGION 3  
NUS CORPORATION  
WORK PLAN FOR CONDUCTING  
A SITE INSPECTION OF

USING AVAILABLE INFORMATION

ROCKWOOD COMPRESSOR STATION

REV - 0

TDD No. F3- 8910-16

Charge No. APCBI\$B

EPA Site No. PA-2165

Rev. 1

_____ FIT Name, Title	_____ FIT OM	_____ RQAR
_____ Date	_____ Date	_____ Date

Rev. 2

_____ FIT Name, Title	_____ FIT OM	_____ RQAR
_____ Date	_____ Date	_____ Date

Assignment Description

FIT 3 has been assigned to conduct a site inspection at the ROCKWOOD COMPRESSOR STATION site. The objective of a site inspection is to provide the initial characterization of the site and determine if the site poses a potential threat to the public health or the environment.

Task Breakdown

The task breakdown of a site inspection is as follows.

- 1) Review background information.
- 2) Contact state and local agencies for relevant information.
- NA 3) Prepare and submit sampling plan to EPA for approval.
- NA 4) Coordinate laboratory analysis. Arrange for site access.
- NA 5) Conduct on- and off-site inspection and sampling.
- NA 6) Collect and ship samples according to standard protocol.
- NA 7) Prepare and submit field trip report, due two weeks after site inspection.
- NA 8) Perform QA of laboratory data; submit data summaries and maps upon completion of QA.
- 9) Prepare and submit report; in the cover letter, include recommendations for need of HRS.
- 10) Address peer review comments and submit final report.

Estimated Technical Hours

The estimated hours for completing this project are

150

Project Staff

Project Manager

[REDACTED]

Site Safety Representative

Other: N/A

X

See attached safety plan

Total estimated cost  
of analysis request \_\_\_\_\_

\*These quotes are used for estimating only and are subject to price quote changes for analysis.

Subcontractor Costs      ☒ Not applicable

Estimated Subcontracting Costs: \_\_\_\_\_

Proposed Schedule /Background Data/Data Assessment Summary

See attached site safety plan

Required Resource List

☒ No limited resource/equipment needed  
☐ List any limited resources/equipment needed

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## Quality Assurance Applicability

The following sections of the Superfund Division Quality Assurance Manual apply to the performance of this assignment.

<input checked="" type="checkbox"/>	QAP	2.5	Work Plans
<input type="checkbox"/>		3.1	Collection of Evidentiary Field Data
<input type="checkbox"/>		3.2	Data Reduction, Validation, and Reporting of Evidentiary Data
<input type="checkbox"/>		4.1	Off-Site Reconnaissance
<input type="checkbox"/>		4.2	On-Site Inspection
<input type="checkbox"/>		5.1	Preparation of Procurement Documents
<input type="checkbox"/>		5.2	Subcontractor Quality Assurance Requirements
<input type="checkbox"/>		6.1	Control of Subcontractor Procurement Activities
<input type="checkbox"/>		6.2	Evaluation and Selection of Subcontractors
<input type="checkbox"/>		8.1	Controlled and Accountable Documents
<input type="checkbox"/>		8.2	Issuance and Distribution of Controlled Documents
<input checked="" type="checkbox"/>		8.4	Technical Reports
<input type="checkbox"/>		9.1	Chain-of-Custody
<input type="checkbox"/>		9.2	Sample Control
<input type="checkbox"/>		10.1	Analysis Techniques
<input type="checkbox"/>		11.1	Implementation of Measuring and Test Equipment Controls
<input type="checkbox"/>		12.1	Packaging, Marking, Labeling, and Shipping of Samples from Hazardous Waste Sites
<input checked="" type="checkbox"/>		13.1	Nonconformance Reporting, Evaluation, and Disposition
<input checked="" type="checkbox"/>		14.1	Implementation and Documentation of Corrective Actions
<input checked="" type="checkbox"/>		15.1	Storage and Retrieval of Quality Assurance Records and Project Files

## Quality Control Requirements

The FIT 3 Regional Operations Manual Standard Operating Procedures and Guidelines indicated will control the quality of all project-related work performed.

### 1. Sampling Procedures

NA

_____	SOG I1	Soil Sampling
_____	SOG I2	Sediment Sampling
_____	SOG I3	Surface Water Sampling
_____	SOG I4	Groundwater Sampling
_____	SOG I5	Purging of Monitoring Wells
_____	SOG I6	Filtration of Groundwater Samples
_____	SOG I7	Air Sampling
_____	SOG I8	Drum Sampling
_____	SOG I9	Tank Sampling
_____	SOG I10	Waste Pile Sampling
_____	SOG I11	Split Sampling
_____	SOG I12	Dioxin/PCB Sampling
_____	SOG I13	Laboratory Coordination

### 2. Sample Custody

NA

_____	SOP I16	Documentation of Chain-of-Custody
_____	SOP I17	Documentation of Traffic Reports
_____	SOP I18	Documentation of Sample Tags
_____	SOP I19	Documentation of Sample Packaging and Shipping

### 3. Calibration Procedures and Frequency *NA*

_____	SOP I1	Use, Calibration, and Maintenance of the HNU PI-101
_____	SOP I2	Use, Calibration, and Maintenance of the Radiation Mini-Alert
_____	SOP I3	Use, Calibration, and Maintenance of the MSA Explosimeter
_____	SOP I4	Use, Calibration, and Maintenance of the MSA Oxygen Indicator
_____	SOP I5	Use, Calibration, and Maintenance of the Hach Model 19000
_____	SOP I6	Use, Calibration, and Maintenance of the OVA 128
_____	SOP I7	Use, Calibration, and Maintenance of the Enmet Gas Detector
_____	SOP I8	Use, Calibration, and Maintenance of the Air Sampling Equipment
_____	SOP I9	Use, Calibration, and Maintenance of the Omega™ PHH-49D

#### Data Acquisition/Technical Approach

All activities will be conducted according to the FIT 3 Regional Operations Manual.

_____	SOP II1	Documentation of Logbooks
_____	SOP II2	Documentation of Photographs
<input checked="" type="checkbox"/>	SOP II3	Documentation of Telecons
<input checked="" type="checkbox"/>	SOP II4	Documentation of Filing and Docketing
_____	SOP II5	Documentation of Samples
<input checked="" type="checkbox"/>	SOP III1	Review of Technical Reports
<input checked="" type="checkbox"/>	SOP III2	Report Format for Preliminary Assessments and Site Inspections
<input checked="" type="checkbox"/>	SOP III3	Reporting On-/Off-Site Activities
_____	SOP III4	Completing Sample Logs
_____	SOP III5	Completing Sample Data Summaries

#### Report/Product Requirements

The report will consist of a completed EPA Form T-2070-3 and a written narrative presenting further information obtained during the completion of the assignment.

#### Report/Product Review

The FITOM or designee will be responsible for the quality verification of the final report.

Documents to be Generated

Check below to indicate the documents that will be generated in the course of the project (both deliverable and non-deliverable):

<input checked="" type="checkbox"/>	Final Report	<input type="checkbox"/>	Laboratory Data
<input checked="" type="checkbox"/>	Draft Report	<input type="checkbox"/>	Organic Traffic Reports
<input type="checkbox"/>	Field Trip Report	<input type="checkbox"/>	Inorganic Traffic Reports
<input type="checkbox"/>	Logbooks	<input type="checkbox"/>	Chain-of-Custody Forms
<input type="checkbox"/>	Photographs and Negatives	<input type="checkbox"/>	Sample Receipts
<input type="checkbox"/>	Well Questionnaires	<input type="checkbox"/>	Site Sampling Plan
<input type="checkbox"/>	Safety Plan	<input type="checkbox"/>	Sample Tags
<input type="checkbox"/>	Site Safety Follow-Up Report	<input type="checkbox"/>	Airbills
<input checked="" type="checkbox"/>	Task-Related Correspondence		
<input checked="" type="checkbox"/>	Report Processing Forms		
<input checked="" type="checkbox"/>	Telecon Records		
<input checked="" type="checkbox"/>	TDD		
<input checked="" type="checkbox"/>	EPA File Information		
<input checked="" type="checkbox"/>	State File Information		
<input checked="" type="checkbox"/>	Completion Document		

Distribution

The undersigned have received, read, and understood this work plan or have attended a pre-field meeting and have discussed the contents of this work plan (must be signed by all project personnel).

_____	_____
_____	_____

Department of Environmental Resources  
 Bureau of Air Quality Control  
 Division of Abatement & Compliance  
 October 5, 1988

SUBJECT: TEXAS EASTERN GAS  
 PIPELINE COMPANY REVIEW

TO: Douglas L. Leshner, Chief  
 Engineering Services Section

FROM: A.U. Sridharan *AS*  
 Air Pollution Control Engineer

Background:

Texas Eastern Gas Pipeline Company (Texas Eastern) owns and operates a gas pipeline transmission system consisting of approximately 10,000 miles of pipeline and 70 compressor station sites located in 16 states. Eighteen (18) of the compressor stations are located in Pennsylvania at the following sites.

<u>Site Name</u>	<u>County</u>
Wind Ridge	Greene
Holbrook	Greene
Uniontown	Fayette
Connellsville	Fayette
Delmont	Westmoreland
Lilly	Cambria
Armagh	Indiana
Bedford	Bedford
Perulack	Juniata
Chambersburg	Franklin
Shermansdale	Perry
Grantville	Dauphin
Eagle	Chester
Bechtelsville	Berks
Marietta (2)	Lancaster
Entrioken	Huntingdon
Rockwood	Somerset

Texas Eastern has collected condensate as part of its pipeline operations and maintenance at the Pennsylvania compressor stations sites and disposed these condensates in unlined earthen pits.

Polychlorinated biphenyl (PCB) lubricating oils were used in the turbines between 1958 until sometime in 1977. The lubricating oils used in the turbines to replace the PCB lubricating oil were then contaminated with residual PCBs. In 1981 PCB residues were discovered by the company in pipeline distillates and condensates. Apparently the PCBs escaped compressor seals and mixed with other condensate liquids. The liquids were discharged from the pipeline into unlined pits where they were burned or allowed to evaporate and infiltrate into the ground. As part of a pipeline PCB removal program initiated by Texas Eastern in 1981, solvents such as "methanol and diesel fuel", were run through the pipeline as cleaning agents. These liquids were also placed along with other solid wastes in the disposal pits.

In 1985, Texas Eastern retained Roy Weston to conduct a pilot study of potential contamination at eight compressor station sites along Texas Eastern's pipeline. This study revealed the presence of PCBs at various locations, including soil and waters of the Pennsylvania sites. Also, Weston's studies indicate the presence of some of the materials listed on the United States Environmental Protection Agency's (EPA's) hazardous substance list (HSL), including volatile organic compounds. Texas Eastern did not have a permit from the Department for the treatment, storage, transportation, processing, discharge or disposal of solid waste or industrial waste or hazardous waste.

The consent order signed on April 1, 1987 between PADER and Texas Eastern includes: source control modification, groundwater assessment and monitoring plans, additional pits and disposal areas, soils, and stream sediment assessment, fish sampling and aquatic survey, and clean-up plans, etc. The purpose of this report is to assess the air impacts of the compressor stations after the source control modifications are completed.

**Source Description:**

When a compressor unit is shutdown, the pressure in the casing of this unit must be released by blowing down through the casing vent. When a compressor unit is started up, the pressure in the turbine starter must be released by blowing down through the starter vent. During the blowdown operation, gas is released from the compressor case or the turbine starter into the case vent line or the starter vent line and discharged through the vent stacks. Pipeline liquids are unlikely to be entrained in the vented gas stream in large quantities.

Pipeline pigs are used to remove accumulated pipeline liquids and solids from the gas pipeline. This operation is performed periodically to ensure a safe and efficient operation of the pipeline. After the accumulated materials are pushed into the receivers, which are sometimes referred to as traps, the pig receivers are isolated from the pipeline, depressurized and opened for pig removal. The gas and pipeline liquids in the pig receiver will be routed directly to a pig receiver separator system which will separate solids, liquids, and gases from each other. Upon removal from the receiver, the pig is enclosed and transported in a sealed container.

There are three major applications for these liquid/gas separators which include: centrifugal compressor case venting, reciprocating compressor venting, and starter venting. The venting system of a reciprocating compressor is referred to as the unit blowdown. For starter venting, the turbine must first be rotated with pipeline gas prior to starting. The gas is vented to a vent stack. The starter gas must be allowed to vent freely with very little back pressure. The separator facility will be sized to start only one turbine at a time and to accept uninterrupted flow from the starter turbine.

**Source Control Modification:**

The source control modifications include the routing of each compressor case vent and starter vent through a gas/liquid separator to remove any entrained liquids prior to gas venting. A low velocity gas/liquid separator will be installed with the gas stream. The decreased velocity will provide a means to allow the pipeline liquids to settle out from the main blowdown stream.

Based on the excessive amounts of hazardous condensate generated at various stations as per the Texas Eastern letter dated October 30, 1986, Delmont and Holbrook compressor stations were chosen for further study to evaluate the impact of air releases.

A letter was sent to Texas Eastern on July 13, 1988 asking them to provide information on source control equipment, emission rates of benzene, ethylbenzene, polychlorinated biphenyls, volume of releases, frequency and time periods in which the releases are made; and, the height, exit velocity, and temperature of the releases.

**Ambient Impact Analysis:**

Texas Eastern provided an estimate of benzene and ethylbenzene emissions in their July 27, 1988 submission to the Department. This estimate is based on an analysis of natural gas which showed a 0.07 mole percent of hexane and heavier components. From this number, the company has calculated a benzene and ethylbenzene emission rate of 0.0016 pounds per 1000 SCF of natural gas. This estimate assumes a 95% liquid removal rate for the gas/liquid separators. The actual removal rate is claimed to be 99%. However, this emission estimate failed to account for the difference between the average molecular weight of natural gas and the average molecular weight of the hexane and heavier components. Using differing molecular weights the emission estimate would be increased of 0.15 pound per 1000 SCF.

The July 27, 1988 submittal did not contain a breakdown between benzene and ethylbenzene. However, analyses of condensate shows benzene and ethylbenzene in approximately a 40:60 ratio. The ambient impact analysis of the Delmont and Holbrook stations is summarized in the attached table.

Using Texas Eastern's estimate and assuming all hexane and heavier components are benzene, the impact is three orders of magnitude smaller than the ambient air toxic guideline of 12.5 ug/m<sup>3</sup> for benzene. As noted above, this assumption should over estimate emission rates approximately 2 1/2 times. Even making the correction to the estimate cited above (error due to ignoring differing molecular weights) the impact at both sites is still less than 1% of the ambient guideline.

The Texas Eastern submittal stated the PCB emissions are zero. A review of the Weston analytical results reveal that PCBs were detected in all six condensate samples at concentrations ranging from 160 ppm to 3500 ppm. The highest level of PCB (3500 ppm) was present in the Holbrook sample HBK-1. The same analytical data showed benzene detected at concentrations ranging from 300 ppm to 4200 ppm. Even with worst case estimates, the PCB ambient impacts would not exceed the air toxic ambient guideline of a 1.8 ug/m<sup>3</sup>. Since PCBs are no longer used by Texas Eastern, the trace amounts of PCBs should continue to drop over time.

Attachment

# AMBIENT IMPACT ANALYSIS

Source	lb/hr	Time Per Shutdown min.	Shutdowns Per Year	sqm/sec	%Year	Max. 1 Hr. Conc. (ug/m <sup>3</sup> )	Annual Conc.	Adjust. Annual Conc.	Corrected Estimate*
Radio 1-10	0.046	3	50/eng.	0.1010	0.00297	37.4	5.61	0.01667	0.0751
37 #1	0.041	5	<10	0.0835	0.00010	37.9	5.67	0.00057	0.0027
37 #2	0.038	2	45	0.1430	0.00017	37.6	5.64	0.00036	0.0043
Pig Reov.	0.052	12	<10	0.0244	0.00034	11.0	1.65	0.00056	0.0026
Starter #1	0.018	5	<10	0.0272	0.00010	10.9	1.64	0.00010	0.0007
Starter #2	0.098	5	45	0.1469	0.00043	40.9	6.14	0.00264	0.0123
						Salmon	Total	0.02156	0.1009
Holbrook									
Radio 14-12A	0.001	2	50/eng.	0.1172	0.00037	37.2	5.58	0.01022	0.0416
Radio 15-58	0.041	2	50/eng.	0.1550	0.00099	34.2	14.12	0.01398	0.0441
Pig Reov.	0.052	12	<10	0.0246	0.00030	11.1	1.67	0.00050	0.0126
						Holbrook	Total	0.02155	0.0983

\*Uses 0.15 lb/1000 SCF emission estimate instead of  
0.0016 lb/1000 SCF estimate.



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# **TEXAS EASTERN PIPELINE COMPANY UPDATE**

**MARCH 14, 1988**

Prepared by

Pennsylvania Department of Environmental Resources

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## Background

Texas Eastern Gas Pipeline Company, a division of Texas Eastern Transmission Corporation, owns and operates a gas pipeline transmission system consisting of approximately 10,000 miles of pipeline and 89 compressor station sites located in 14 states. Texas Eastern owns and operates 18 compressor station sites along a portion of their interstate transmission system that crosses the Commonwealth. Polychlorinated biphenyls (PCB) lubricating oils were used in the turbines at some of the compressor stations until 1977.

PCB residues were discovered by the company in pipeline distillates and condensates in 1981. The PCB's apparently escaped compressor seals and comingled with other condensate liquids. The liquids were commonly discharged by the company from the pipeline into unlined pits where they were burned or allowed to evaporate/infiltrate into the ground.

On February 26, 1987, DER began to conduct preliminary investigations by sampling wells, soils, sediments, streams, fish, livestock and milk from the area immediately adjacent to and downgradient from the compressor station sites to determine the extent of contamination and provide background data for human health and environmental risk assessments.

The findings of these investigations have been addressed in previous reports. These reports and additional data may be obtained from the Department by governmental officials, community leaders and other interested parties. However, much of the data collected by the Department is not suitable for public dissemination because of its technical nature. Therefore, citizens who have the potential to be directly affected by Texas Eastern operations and respective community leaders are invited to discuss the data directly with Departmental experts who will be available to provide appropriate interpretations and assistance.

In January 1988, Texas Eastern and the DER entered into a landmark agreement providing for payment of an amount up to \$1,000,000 to DER for the first year of oversight costs.

## **DER Activities**

DER continues to devote a great deal of time and effort to the Texas Eastern Pipeline Company case to insure that public health, safety and the environment are protected and that the company complies with all terms and conditions of the Consent Order and Agreement of April 1, 1987.

This spring, work activities mandated by the Consent Order will significantly increase and the demands on DER will increase accordingly. The Department has hired additional staff to meet this increased demand.

DER activities associated with the response to the Texas Eastern Pipeline Company case are as follows:

- Negotiation of clean-up levels and schedules, civil penalties, and recovery of Department oversight costs.
- Monitor compliance with the Consent Order and Agreement.
- Initiation of legal action if the company fails to comply with the Consent Order and Agreement.
- Continue to provide oversight for monitoring well drilling, monitoring well sampling, and on-site and off-site soils and sediment sampling.
- Continue to inspect the sites for compliance with environmental laws and regulations.
- Continue to investigate the sites to verify proper assessment of the extent of contamination.
- Continue to investigate the sites when pollution incidents occur.
- Continue to investigate citizen complaints and perform sampling and analysis activities.
- Continue to monitor soils, sediment, groundwater, water and fish sampling results to assess the existence of off-site human health hazards.
- Continue to meet with citizens who are concerned about the Texas Eastern problem and it's impact on their community.
- Continue to review soil and sediment sampling reports and soil and sediment sampling work plans for each of the 18 sites.
- Continue to review groundwater sampling reports and sampling work plans for each of the 18 sites.
- Review proposed maintenance and reconstruction activities at the sites to insure that these activities do not interfere with site assessment or remedial actions.
- Review emergency response Preparedness, Prevention and Contingency Plans (PPC Plans) for all sites.
- Review interim and final source control plans and oversee their implementation at each site, if applicable.
- Develop with the assistance of our toxicology consultant, either a site-specific health and environmentally risk-based approach for site clean-up or a conservative uniform clean-up level for all sites.

## **Compliance with the Consent Order and Agreement of April 1, 1987**

In general, the Texas Eastern Gas Pipeline Company is meeting the deadlines for sampling and reporting results as established in the Consent Order. Specifically, the Department is receiving the Phase I soils and groundwater data and the Phase II soils and groundwater work plans and data within the required time frames. Some of the activities completed by the company, with DER oversight, are more fully documented in the attached Tables 1, 2 and 3.

In January 1988, the company submitted the Pit Clean-Up Plan as required by the Consent Order. The Pit Clean-Up Plan is only one component in a comprehensive remedial effort. The Department is preparing its legal and technical position in response to the plan.

## **Recently Identified Disposal Pits**

In January, the Department received a report of Newly Identified Areas from the Texas Eastern Gas Pipeline Company as a result of the company's investigations to identify other disposal areas as required by the Consent Order. This report identifies 22 new disposal pits some of which are expansions of existing pits, trash disposal pits, and fire fighting training areas (see Table 1). This report is currently under review by the Department.

## **Toxicology Consultant**

In December 1987, the Department hired, on an emergency basis, a toxicology consultant to provide expertise in evaluating PCB clean-up levels agreed to by the USEPA and Texas Eastern. The consultant, ICF Clement Associates, is nationally recognized in the toxicology and contaminant migration field.

The Department is negotiating a longer term contract with Clement Associates to assist in the establishment of either a health and environmentally risk-based approach for clean-up on a site-by-site basis, or a conservative uniform clean-up level applied to all sites. The contract will be available to address not only the Texas Eastern PCB problem, but other, chemical contaminant problems as well. This contractor will prove invaluable to the Department until we are adequately staffed with Ph.D. toxicologists, and in the event of litigation, by providing unimpeachable, expert testimony.

## **Public Health Effects**

The Department received the analytical results for fish sampled at a homeowner's pond adjacent to the Delmont site in Westmoreland County in mid-January 1988 indicating that PCB levels in edible portions of the fish were more than twice the level recommended by the FDA. The Department notified the resident accordingly. In addition, in late summer 1987, the Department determined that the spring which feeds this pond was contaminated with PCB's. The Department also notified the resident at that time not to consume fish or waterfowl from the pond.

No new soils or groundwater data have been received to date to indicate an immediate off-site public health hazard although the Department is still extremely concerned about the more subtle, currently unknown long term health and environmental hazards that may exist. When the Department receives all Phase I soils data, the Interdepartmental Health Effects Group, consisting of expert representatives from the Department of Environmental Resources and the Department of Health, will meet to further evaluate potential off-site human health hazards and make recommendations on any actions the Department should take. All new data is assessed for potential health impacts as soon as it is received.

## Groundwater

Since December 1987, nine new monitoring wells have either been drilled or developed for use from existing site wells bringing the total number of monitoring wells for all sites to 149. Three quarterly rounds of groundwater samples have been collected from the 18 sites and recently, the Department has been receiving results from the January, 1988 round.

The results of these samples indicate that a total of 13 sites show groundwater contamination above detection limits. Nine sites are contaminated with PCB's, two sites with BTXE (benzene, toluene, xylene, ethylbenzene), and two sites are contaminated with both.

Although the groundwater investigation is continuing, PCB's have been confirmed off-site at the Holbrook site located in Greene County and the Delmont site located at Westmoreland County. Sites showing off-site contamination or potential threats to private or public drinking water supplies receive immediate attention and action by the Department's technical staff.

To date, no private or public drinking water supplies have shown contamination attributable to the Texas Eastern sites. For this reason, the Department believes that there is no immediate threat to public health at this time. Attached is Table 2 which shows the number of monitoring wells per site, sites showing groundwater contamination, and probable or existing contamination off-site.

## **Soils/Sediments**

Reports from Phase I soil and sediment sampling have been submitted for 13 sites. Phase II work plans have been submitted for 12 sites. Phase II sampling efforts will extend the site characterization beyond those areas where PCB's were found at detectable levels by Phase I sampling. Attached is Table 3 which shows the numbers of soil and sediment samples taken to date by DER and by Texas Eastern, and the submittal dates for Phase I soil and sediment reports and Phase II work plans.

Phase II soil and sediment work plans are generic in that the approach and sampling methods are identical for all sites. A different chemical analytical method, Rapid Extraction Method (REM), was proposed for Phase II which provides for expedited analysis of soil samples using a dedicated, possibly mobile laboratory. The modified Contract Laboratory Procedures (CLP) Method used in Phase I must still be used for sediment analysis.

Using the REM method, the time between sample collection and the submittal of Phase II soils analysis reports would be cut approximately in half compared to the CLP method. For example, one round of Phase II sampling would require 30 weeks from sample collection to finished report using the CLP method but only 18 weeks using the REM method.

## **Indiana University of Pennsylvania Wildlife Study**

Two professors from Indiana University of Pennsylvania have proposed to conduct a scientific study of the deer mice population distribution within varying distances from the Armagh compressor station site located in Indiana County. The Department believes the study may provide insight into the effects upon the environment of hazardous materials generated by pipeline operations, and indirectly may also provide a relationship to potential human health hazards.

The University has requested assistance from the Department to conduct the study. The costs for the project may range from \$25,000 to \$40,000. The Department is willing, at a minimum, to provide limited soil sampling and laboratory analysis assistance.

## Summary

- The Department's review of the data continues to indicate no immediate off-site public health hazards.
- Texas Eastern Gas Pipeline Company is maintaining compliance with the deadlines in the Consent Order and Agreement of April 1, 1987.
- The Department's response to the Texas Eastern problem continues to draw heavily upon staff resources and the work demands are expected to continue at even higher levels over the next year.
- The company has identified 22 new pits some of which are expansions of existing pits, trash disposal pits, and fire fighting training areas.
- The Department is negotiating a long term contract with Clements Associates, Inc., nationally recognized as a leader in the toxicology and contaminant migration field, to assist in the establishment of either uniform clean-up levels or health and environmentally risk-based approaches for clean-up not only for the Texas Eastern case but other cases involving spills of hazardous materials.
- Staff from the Indiana University of Pennsylvania are proposing to conduct a wildlife study of the deer mice population around the Armagh Compressor station site located in Indiana County. The study may provide insight into the effects upon the environment of pipeline operations and may indirectly provide a relationship to potential human health hazards.

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SITE/COUNTY	REFERENCE NUMBER	SIZE	APPROXIMATE LOCATION*	USE
Wind Ridge/Greene	PA-20-01 PA-20-02 PA-20-03 PA-20-04	20' Di X 3' 15' Di X 2' 60' X 20' X 10; 60' X 20' X 10'	300' N of Garage 470' SSW of Garage 800' W of Garage 760' W of Garage	Pipeline Liquids Pipeline Liquids Trash Trash
Holbrook/Greene	PA-HOL-01 PA-HOL-02 PA-HOL-03 PA-HOL-04 PA-HOL-05 PA-HOL-06 PA-HOL-07** PA-HOL-08** PA-HOL-09**	15' Di X 3' 30' Di X 5' 15' Di X 1' 160' X 40' X 10' 95' X 40' X 10' 85' Di 85' Di 30' Di 30' Di	540' NNW of OWG Building 870' WSW of OWG Building 930' W of OWG Building 1150' WNW of OWG Building 1050' WNW of OWG Building 1200' WNW of OWG Building 1050' WNW of OWG Building 780' W of OWG Building 830' W of OWG Building	Pipeline Liquids Pipeline Liquids Pipeline Liquids Trash Trash Chromate Coolant Chromate Coolant Pipeline Liquids Pipeline Liquids
Uniontown 21/Fayette	PA-21-01 PA-21-02	30' Di 30' X 10' X 6'	400' SSE of Garage 380' E of Garage	Unknown Trash
Connellsville/Fayette	PA-21A-01 PA-21A-02 PA-21A-03** PA-21A-04** PA-21A-05** PA-21A-06** PA-21A-FF**	30' X 15' X 3' 30' X 15' X 3' 35' Di 50' Di 35' X 50' 30' Di 5' DI X 1'	535' NNW of Garage 535' NNW of Garage 850' W of Garage 890' W of Garage 840' W of Garage 720' WNW of Garage 680' W of Garage	Pipeline Liquids Pipeline Liquids Pipeline Liquids Pipeline Liquids Pipeline Liquids Pipeline Liquids Fire Fighting
Delmont/Westmoreland	PA-DEL-01 PA-DEL-02 PA-DEL-03 PA-DEL-04	20' Di 20' Di 25' X 25' X 10' 20' Di	550' W of OWG Building 560' WSW of OWG Building 570' NNE of OWG Building 430' WNW of OWG Building	Pipeline Liquids Pipeline Liquids Trash Pipeline Liquids
Lilly/Cambria	PA-LIL-01	10' Di X 4'	730' W of OWG Building	Pipeline Liquids
Armagh/Indiana	PA-ARM-01 PA-ARM-02	10' Di X 4' 10' Di	475' NE of Microwave Tower 660' SW of Microwave Tower	Pipeline Liquids Hydraulic Fluid
Bedford/Bedford	PA-22A-01 PA-22A-02 PA-22A-03 PA-22A-04 PA-22A-05** PA-22A-06** PA-22A-FF**	12' Di X 10' 10' X 30' X 10' 10' X 30' X 10' 10' X 30' X 10' 10' X 30' X 10' 12' X 18' X 7' 6" - 8" Deep	320' NNE of Auxiliary Bldg 870' WNW of Auxiliary Bldg 810' WNW of Auxiliary Bldg 910' WNW of Auxiliary Bldg 950' WNW of Auxiliary Bldg 875' W of Auxiliary Bldg 925' WNW of Auxiliary Bldg	Pipeline Liquids Trash Trash Trash Trash Chromate Coolant Fire Fighting

\* Approximate Distance and Direction from Prominent Structures:

N - North; S - South; E - East; W - West; OWG - Office, Warehouse, and Garage

\*\* Newly identified pits (22 total)

**Table 1**  
(continued)

SITE/COUNTY	REFERENCE NUMBER	SIZE	APPROXIMATE LOCATION*	USE
Perulack/Juniata	PA-PER-01 PA-PER-02 PA-PER-03 PA-PER-04** Fire Area **	20' Di X 10' 20' Di X 10' 30' Di X 15' 20' Di 2 Drums in Grd	435' ESE of OWG Building 530' W of OWG Building 740' W of OWG Building 420' W of OWG Building 660' W of OWG Building	Pipeline Liquids Pipeline Liquids Trash Pipeline Liquids Fire Fighting
Chambersburg/Franklin	PA-23-01 PA-23-02 PA-23-03 PA-23-FF**	30' Di X 7' 40' X 30' Multiple Pits 8' Di X 1'	615' NNE of Microwave Tower 675' N of Microwave Tower 675' N of Microwave Tower 600' NE of Microwave Tower	Pipeline Liquids Trash Trash Fire Fighting
Shermans Dale/Perry	PA-SHE-01 PA-SHE-02 PA-SHE-03 PA-SHE-04 PA-SHE-05**	20' Di X 5' 20' Di X 5' 20' X 20' Trench 20' X 20' Trench 15' Di	270' NE of Office Building 435' E of Office Building 830' ESE of Office Building 850' ESE of Office Building 410' E of Office Building	Pipeline Liquids Pipeline Liquids Trash Trash Unknown
Grantville/Dauphin	PA-GRA-01 PA-GRA-02 PA-GRA-03** PA-GRA-04** PA-GRA-05** PA-GRA-06**	20' Di 20' X 15' Trench 20' Di 100' X 20' Trench 35' X 20' Trench 60' X 20' Trench	510' W of OWG Building 1140' NNE of OWG Building 450' W of OWG Building 1020' NNE of OWG Building 880' NNE of OWG Building 890' NNE of OWG Building	Pipeline Liquids Trash Pipeline Liquids Trash Trash Trash
Eagle/Chester	SUMP 01 SUMP 02 PA-25-02 PA-25-03 PA-25-04** PA-25-05** PA-25-06**	6' X 20' X 12' Deep 35' X 15' 30' Di X 5' 14' X 14' X 8' Deep 45' Di 35' Di 20' Di	300' NNW of Warehouse Bldg 280' NNW of Warehouse Bldg 625' NNE of Warehouse Bldg 710' E of Warehouse Bldg 2050' W of Warehouse Bldg 330' W of Warehouse Bldg 330' W of Warehouse Bldg	Unknown Unknown Fire Fighting Trash Trash Unknown Unknown
Bechtelsville/Berks	PA-BEC-01 PA-BEC-02	20' Di X 6' 30' X 30' X 25'	320' SE of OWG Building 375' SE of OWG Building	Pipeline Liquids Trash
Marietta 24/Lancaster	PA-24-01 Dump Site	42' Di 25' X 30'	330' NW of S Corner of Yard 875' NE of S Corner of Yard	Unknown Trash
Marietta 24A/Lancaster	PA-24A-01 PA-24A-FF	30' Di X 4' Low Area	520' SE of Microwave Tower 780' SE of Microwave Tower	Pipeline Liquids Fire Fighting
Entriaken/Huntingdon	PA-ENT-01 PA-ENT-02 PA-ENT-03	10' Di Unknown: Gully 10' Di X 3'	300' SSW of Compressor Bldg 360' W of Compressor Bldg 490' NW of Compressor Bldg	Hydraulic Fluid Trash Brush
Rockwood/Somerset	PA-22-01 5 Sumps	30' Di X 2' (Concrete)	320' SE of Office Building 180' SE of Office Building	Unknown Trash

\* Approximate Distance and Direction from Prominent Structures:

N - North; S - South; E - East; W - West; OWG - Office, Warehouse, and Garage

\*\* Newly identified pits (22 total)

**Table 2**  
**Texas Eastern Monitoring**  
**Well Drilling Summary**  
**(February 23, 1988)**

SITE/COUNTY	NUMBER OF MONITORING WELLS	PHASE II INVESTIGATION*	NUMBER OF SENTINEL WELLS	CONTAMINATION OFF-SITE
Chambersburg/Franklin	4	No	None	Unknown
Eagle/Chester	4	No	None	Unknown
Uniontown 21/Fayette	4	No	None	Unknown
Bechtelsville/Berks	4	No	None	Unknown
Wind Ridge/Greene	8	Yes	None	Probable
Armagh/Indiana	9	Yes	None	Unknown
Rockwood/Somerset	3	No	None	Unknown
Holbrook/Greene	16	Yes	None	Yes
Lilly/Cambria	7	Yes	None	Probable
Connellsville/Fayette	8	Yes	None	Unknown
Delmont/Westmoreland	14	Yes	5	Yes
Grantville/Dauphin	11	Yes	3	Probable
Entriken/Huntingdon	7	Yes	None	Unknown
Marietta 24/Lancaster	13	Yes	None	Probable
Marietta 24A/Lancaster	11	Yes	None	Unknown
Shermans Dale/Perry	12	Yes	None	Unknown
Perulack/Juniata	8	Yes	1	Unknown
Bedford/Bedford	6	Yes	1	Probable
<b>TOTALS</b>	<b>149</b>	<b>13 of 18</b>	<b>8</b>	<b>2 confirmed 5 probable</b>

\*Underway on all sites showing groundwater contamination.

**Table 3**  
**Texas Eastern Soil**  
**and Sediment Sampling Summary**  
**(February 23, 1988)**

SITE/COUNTY	NUMBER OF DER SOIL/SED. SAMPLES	TE PHASE I REPORT (DATE RECEIVED)	NUMBER OF TE PHASE I SOIL/SED. SAMPLES	TE PHASE II WORK PLAN (DATE RECEIVED)
Bedford/Bedford	28	12/21/87	227	1/8/88
Perulak/Juniata	24	2/12/88	307	2/12/88
Entriiken/Huntingdon	29	1/20/88	429	2/2/88
Chambersburg/Franklin	2	N.R.	163 est.	N.R.
Marietta 24/Lancaster	0	N.R.	74 est.	N.R.
Marietta 24A/Lancaster	4	2/15/88	217 est.	N.R.
Grantville/Dauphin	14	2/15/88	460	2/15/88
Shermans Dale/Perry	2	N.R.	397 est.	N.R.
Lilly/Cambria	5	1/15/88	336	1/28/88
Wind Ridge/Greene	2	12/14/87	162	1/8/88
Holbrook/Greene	2	1/12/88	332	1/12/88
Delmont/Westmoreland	3	2/5/88	389	2/19/88
Armagh/Indiana	0	12/23/87	349	1/8/88
Rockwood/Somerset	0	1/29/88	81	1/12/88
Connelsville/Fayette	0	1/20/88	353	2/2/88
Uniontown 21/Fayette	0	1/8/88	189	1/22/88
Bechtelsville/Berks	0	N.R.	170 est.	N.R.
Eagle/Chester	0	N.R.	100 est.	N.R.
<b>TOTAL</b>	<b>115</b>	<b>13 of 18</b>	<b>4,735</b>	<b>12 of 18</b>

(N.R. = Not Received)

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Concept

March 6, 1987

SUBJECT: Texas Eastern Gas Pipeline Company  
Rockwood Compressor Station  
PCB and VOC Contamination/Preliminary Investigation  
Black Township, Somerset County

TO: Terry R. Fabian  
Regional Environmental Protection  
Director  
Southwestern Regional Office

FROM: Eric T. Manges *ETM*  
Hydrogeologist  
Bureau of Waste Management  
Southwestern Regional Office

### Introduction

The initial hydrogeologic investigation has been conducted as a result of information received by this Department which indicates that the Texas Eastern Gas Pipeline Company disposed of PCB contaminated oils and condensate at their compressor stations. The PCB contaminated oils were apparently disposed in unlined pits on the compressor station properties.

There are two Texas Eastern pumping facilities within 1.7 miles of each other on the same pipeline in the Rockwood area.

The first station to be investigated was not the main Rockwood Compressor Station which is intended to be the focus of this preliminary investigation. This first station, which is located in Milford Township, 1.7 miles east of the main compressor station, shall be referred to in this report as the Rockwood Gauging Station. The initial samples taken at this site shall be described in the sampling section of this report, but detailed information on this site shall not be presented at this time. If the sampling indicates a contamination problem at the site, further investigation shall be initiated.

Upon receipt of additional, more precise information from Texas Eastern, the main compressor station was located and a preliminary sampling investigation was initiated. To avoid confusion, the main compressor station shall be referred to in this report and on laboratory analysis forms as the Rockwood/Murdock Compressor Station. This is the station at which Texas Eastern has admitted to disposing of PCB contaminated fluids.

The Rockwood/Murdock Compressor Station is located in southern Somerset County, 1.5 miles south of the village of Murdock. This site is situated at latitude 39°56'18" North and longitude 79°06'12" West on the Murdock, Pa. 7.5' U.S.G.S. Quadrangle Map.

### Site Description

The Rockwood/Murdock Compressor Station is located on the northwestern flank of the Negro Mountain in the Allegheny Mountain section of the Appalachian plateau province. This station is located on the top of a small ridge at an elevation of 2,000 feet. The groundwater discharges and surface waters from the site drain to the southeast into a small tributary of Wilson Creek. Wilson Creek enters into Coxes Creek approximately two miles west of the tributary (see attached topographic map).

The site is surrounded by a 6-foot high cyclone fence which has deteriorated in several places and allows for easy access to the site.

Texas Eastern employees at the site have indicated that the facility has not been used as a compressor station for many years and that the lines currently only pass through the property. The buildings on the site appear to be circa 1940's and the site in general appeared to be defunct.

### Disposal Pit

The station layout map (attached), supplied by Weston, indicated that the disposal pit is located in the extreme eastern corner of the facility property. A Texas Eastern employee helped to verify the location of the pit. A small stream channel conveying upslope spring water passes within 25 feet of the disposal pit. The pit has been backfilled and regraded, but no vegetation has been established on the overlying soil.

### Potentially Affected Water Supplies

A spring, which originates topographically upslope and just above the fenced area, flows through the western portion of the fenced property and within 25 feet of the disposal site. This water flows into a roadside drainageway which runs along the public road in front of the facility. As the drainage ditch advances away from the site, it develops into a small stream. This drainageway/stream also collects all other drainage from the site and conveys it to the tributary of Wilson Creek. The eastern portion of the site is fairly swampy and also seeps into the drainageway.

An off-site spring enters the drainageway approximately 100 feet downstream from the on-site spring. This spring is topographically downslope from the disposal pit and is located on the property of Paul Boden.

An on-site drilled well exists next to the office and maintenance building, approximately 100 feet west and upgradient of the disposal pit.

An off-site drilled well exists just off of the northwest corner of the fenced area on the Leroy Roberts property. This well is approximately 280 feet northwest and upgradient from the disposal pit.

Hydrogeology

oral communication  
w/ E. Manges  
4/17/89.  
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The general dip of the regional rock strata in the area is towards the ~~access~~ of the Negro Mountain Anticline which lies approximately 2.5 miles ~~southeast~~ of the site. The strata beneath the site is composed of inter-bedded layers of sandstone, shale and limestone in the Glenshaw Formation of the Conemaugh Rock Group. The characteristic jointing and fracturing in this formation will allow for good water conveyance, especially in the sandstone layers.

It would be expected that the regional groundwater flow direction will follow the general slope of the underlying rock strata which is to the ~~southeast~~. In many cases, a shallow topographically-controlled water-bearing zone may exist, depending upon the depth of soil, the topographic slope, and the degree to which the uppermost rock layers have been weathered. As a result, groundwater flow directions may vary between shallow and deep water zones.

Sampling

The sampling of the Rockwood Guaging Station occurred on February 28, 1987. No disposal pit was observed at this site. The following is a list of the samples and their description (see attached station layout map for locations):

The sampling at the Rockwood/Murdock Compressor Station occurred on March 2, 1987. The following is a list of the samples and their descriptions:

<u>I.D. Number</u>	<u>Description</u>
2518312	On-site well
2518313	On-site spring channel
2518314	Roberts Well
2518315	Boden Spring
2518316	Off-site ditch/stream
2518317	On-site spring channel sediment
2518318	Off-site ditch/stream sediment

All water sample points were analyzed for PCB's, VOC's and metals.

Soil samples from the pits were not obtained. The disposal pits have been backfilled and regraded since the cessation of disposal activities. It was not possible to obtain a sample at depth due to lack of equipment and time constraints.

Comments & Recommendations:

1. The disposal pit is located next to the fence at the eastern corner of the property. The fence has numerous breaks that allow for easy access to the site and the disposal pit. The entire fence should be completely secured.
2. If contamination is observed in any of the sample analysis results, the sampling point in question should be immediately resampled for further verification.
3. If contamination is confirmed at any of the sampling locations, a thorough assessment of the type, location and extent of the contamination should be carried out according to the requirements set forth in 25 Pa. Code §75.264(n). A abatement/clean-up plan should also be prepared and initiated.
4. Soil sampling of the disposal pits should be conducted through drilling with split spoon samplers. Samples should be obtained at one foot intervals.
5. If contaminants are detected in the on-site spring channel next to the disposal pit, (No. 2518313, No. 2518317), then the spring origin, just upslope (south edge) from the fenced property, should be sampled.
6. The on-site and off-site wells are both geologically and topographically upgradient from the disposal pit. There does not appear to be an immediate contamination threat to any public or private water supplies.

It does appear that there is a possibility of degradation of the local environment around the eastern corner of the site. The results of sediment samples taken in this area should help to ascertain whether hazardous pollutants have migrated off site.

8910-16-27

FILE-16-27

February 26, 1988

SUBJECT: Texas Eastern PCB Case  
Pit Cleanup Program for the  
Pennsylvania Sites  
January 28, 1988

TO: Bob Orwan, Soil Scientist  
Bureau of Waste Management  
Central Office

FROM: William F. Graham, Soil Scientist  
Facilities Section  
Bureau of Waste Management  
Region V

WFG

An evaluation of the above-subject program prepared by Roy E. Weston, Inc. for Texas Eastern has been made.

The purpose of this report is to present a disposal pit cleanup plan for sites identified to have PCBs present. This cleanup <sup>plan</sup> was submitted as required by Paragraphs 15B of the Consent Order.

#### Comments and Recommendations

1. Review of the proposed cleanup plan indicate the following information presented:
  1. Discussion of pit dimensions and depths based on historical information and the Weston pit boring program.
  2. PCB cleanup levels with a summary of compounds found in the pits across Pennsylvania.
  4. Available methods that may be considered for removal or decontamination of PCB contaminated earth material removed from the pits.
  5. Proposed outline for things that will need to be addressed in a cleanup plan.
  6. Proposed method of how estimated raw material to be removed from the disposal pits based on historical data.

It appears that Texas Eastern wants to excavate all of the materials within the historical pit boundaries presented and depth removal based on historical depth or from the pit boring data. It appears Texas Eastern wants to excavate a fixed amount of material from the pits as determined from the above data. Further, in some cases, once all excavation is completed, soil sampling will be done. If PCBs are found, 25 ppm or greater, excavation beyond the pit boundaries will continue until bedrock is reached, groundwater is encountered, or excavation is 25' below the ground surface.

It appears that Texas Eastern may handle or dispose of excavated material by one or some of the following methods or others as well:

1. Excavation
2. Rotary kiln incineration
3. Infrared incineration
4. Fluidized bed/circulating bed incineration
5. Landfilling (this may be by transferring to an off-site disposal site or landfill constructed on-site).

The cleanup approached presented is more of an outline of what a plan would involve. Section 5 is just an outline of ~~tests~~ <sup>tasks</sup> that must be considered and methodology to determine estimates of material to be excavated. However, no specific pit cleanup plan has been presented as to what Texas Eastern specifically plans to do in regard to the outlined tasks presented in Sections 4 and 5.

2. Relative to the proposed cleanup levels and cleanup of the pits, no discussion of the groundwater conditions and quality has been addressed. This may be relative in regards to cleanup levels to establish.
3. The historical boundaries as presented for some pit appears questionable. The sites in question that I am involved with are as follows:
  1. Armagh
  2. Lilly
  3. Connellsville
  4. Rockwood

The Department has a plan map of the Lilly station which identifies the disposal or burn pit to be 8' deep by 40' in diameter. See Attachment 1. Texas Eastern has reported to the Department historical information that indicates this pit was 10' in diameter and 4' deep. Based on this information, there is quite a discrepancy. Further, at these sites, so-called outside pit borings indicate the presence of PCBs at depth. These borings are located outside the historical pit boundaries presented by Texas Eastern. The outside pit borings suggest that there has either been horizontal migration through the soil from the pit, these borings are in the pits or another contamination source is responsible. However, Weston or Texas Eastern has not addressed this issue. See Attachments 1 and 2 for location maps and PCB concentrations found in the borings. However, this issue may or may not be of greater concern depending on cleanup levels.

The Department staff are still evaluating the aerial photographs. A report on the photographs usefulness may be available in the future.

5. Since pit borings didn't indicate the presence of PCB at the Uniontown 21 site, no cleanup or pit removal is proposed. The Department needs to determine if this is acceptable.

#### Summary

From a review of the pit cleanup program, the plan is not adequate. The document presented is not a cleanup plan. It fails to address what Texas Eastern plans to do specifically and specific considerations that may need identified for a specific site. In short, this program indicates Texas Eastern has not planned how they will conduct the pit cleanup. Therefore, the plan appears not to address Paragraph 15B of the Consent Order and is not recommended for approval.

A detailed pit cleanup plan needs submitted and to include in detail the following: Some of this information will be site specific and will not be addressed on a generic basis.

1. Cleanup levels. This should be established by the Department.
2. Analytical analysis and how samples will be handled for quick turnaround. This may involve a less time consuming analysis determination so if contamination is found, further work can continue. However, Item 1 is directly related to this item.
3. Safety plan to address pit cleanup work.
4. How will excavated soils be handled once removed?
  - A. Transported immediately to a disposal site?
  - B. Excavated and stored on site? If so what type of structure will be designed to prevent contamination on and off site? Where will it be located at each station?
  - C. If this waste is covered under RCRA, Texas Eastern may have to meet the hazardous waste regulations in regard to storage and/or handling.
5. Plans and procedures for decontamination of excavation equipment and transportation vehicles. Site location of decontamination area for each site may need identified.
6. The plan will have to address how decontaminated liquids will be handled and what facilities will be available to handle the waste.
7. Erosion & Sedimentation Controls as well as runoff and runoff around the pit area and possible storage area needs addressed. Needs to address how runoff contaminated liquid will be handled and type of facilities that will handle the liquid.